



## Stanley Mulaik, Pres. ANS Society



STANLEY MULAIK

Stanley Mulaik is no stranger to members of this Society. For several years he served as editor of this NEWSLETTER, was recently president of the western division of ANSS, and last year as president-elect, was the person who planned and arranged the fine program for our December meetings in Washington, D. C.

Stanley Mulaik is Assistant Professor of Biology at the University of Utah. He has a B.S. from Penn State Teachers College, an M.S. in nature study from Cornell University, a Ph.D. from the University of Utah. He taught elementary and high school biology five years, supervised nature study in junior high and college for seven years and has taught college biology for nineteen years. He is active in camping programs. He has published some thirty papers in the field of zoology. Stanley is a hard worker and a very understanding person. His leadership should mean a very interesting and progressive year for the Society.

## President's Message

The ANSS has launched into a second half century of service to the cause of nature study as exemplified by Liberty Hyde Bailey in *The Nature Study Idea*. Ahead is a challenge, collectively to the Society and individually for each member to continue and to expand service to the nature study movement.

Fundamentally everyone is interested in his natural, physical, and biological surroundings. There has been an enormous increase in recent years in the numbers of people who flock to the out-of-doors to enjoy its offerings. They need interpretation of their surroundings that they may gain increased understanding of the part each item plays in the intricate pattern of dynamic interrelationships. The National Park Service, the Forest Service, and other agencies have found a great demand for an interpretive program and have made fine progress in providing it. At the local or community level, there has been very little done. A few organizations have given satisfactory service in interpreting nature, but these meet the needs of only minute portions of the population.

In most of these efforts the approach centers on the recreational aspects of the beauty in nature or to reverence for the wonders of the out-of-doors; perhaps it is enjoyment of the out-of-doors through hunting and fishing.

This leads to related activity for which people have felt a need. While there is a growing sense of the interrelation of all elements both physical and biological within our surroundings, there is also a growing concern over man's relation to these. Building roads, cutting forests, grazing mountain ranges, mining mountain sides, polluting streams, eliminating predators, plowing up sod or trampling over picnic grounds does something to the area concerned. This something was really not man's intent but occasioned by his lack of understanding of the chain reactions which would result from certain of his activities. Problems have

arisen out of such misuse of land and these are the problems of conservation. Too much conservation effort in the past has been concerned with the symptoms arising from misuse of our resources. The reason for the misuse is often man's lack of understanding of the inherent interrelationships involved, and which he cannot severely disturb without bringing upon himself grave problems, or perhaps even disaster.

The role nature study can play in our resource complex is to give the public a broader base of knowledge of what the interacting elements are and the relation man holds to these. At the meetings in Washington, numerous papers were read dealing with this problem. In various ways each urged that a broader base be given people for better understanding of our resources. To help accomplish this, the ANSS is formulating a program and a plan of action. More about this later. Many members will be called upon to participate.

\* \* \*

Committee assignments will be made very shortly for carrying on activities to promote various phases of the ANSS program. We hope everyone is willing. Not only willing to see the work done but willing to do it.

\* \* \*

The brainstorm which Roland C. Ross, director from California, had of having specimens of western rocks, shells, evergreen cones, etc. for the ANSS banquet of our recent Annual Meetings in Washington, D. C., was put into action and a supply was provided by Stanley and Dorothea Mulaik. During the evening, these caused considerable interest. Persons whose names were drawn at random from the door prize lists were asked to tell about what nature story their specimen reminded them.

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The ANSS heartily thanks those publishers which supplied the books for door prizes, and particularly Mr. McGhie of Science Materials Center for providing a supply of spectroscopes.

## AMERICAN NATURE STUDY SOCIETY NEWS LETTER

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## Education: Gateway To Conservation\*

JOSEPH J. SHOMON  
Chief, Education Division  
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Although conservation as a technology, as well as a way of living, has made notable advances in America, the vast majority of our people still lack an informed approach to natural resource values and problems. While the past half century has seen substantial progress in the scientific management of soil, water, forests, wildlife and fisheries — and to a degree in minerals — a much slower advance has been made through education in the acceptance of conservation as a philosophy of living.

If our conservation effort is inadequate to meet the challenge of the future, there must be something that can be done about it — and there is. A broad program of action in three areas is suggested: (a) the area of natural resources management; (b) the area of conservation communications; and (c) the area of conservation education. The improvement and strengthening of each area is essential, and the effort should be simultaneous on all three fronts.

On the management front we need more and better leaders — administrators, scientists, managers. Also, more adequate financial support is needed for natural resources programs. A good administrator cannot do a good job with inadequate personnel and a constantly frustrating budget.

On the conservation communications front, great opportunities await development. At the present time the four mass communications media (press, radio, TV, and film) are not being used effectively.

\* This is a condensation of an address given at the December (1958) meetings of the American Nature Study Society.

tively — at least not on a broad enough scale in America to be effective. The press, in particular, as a great vehicle of conservation information needs better harnessing. Our state conservation magazines can be vastly improved. The use of radio and TV and film for the transmission of conservation knowledge has not been fully explored. Much the same can be said of other communications media.

Finally, an aggressive course of action is needed in several vital areas of conservation education itself: (1) primary and secondary school level; (2) college level; and (3) adult conservation education.

At the primary and secondary level, there is much to recommend a separate course of training in conservation. Concentrated courses both in the 6th grade and in the 9th or 10th grade might well be considered. Such an approach, of course, has never met with favor from most educators, the preference being for the more gradual integrated approach in all grades. However, if a forceful impression is to be made on our growing citizenry of the importance of conservation, it seems doubtful this can be done through the present so-called method of concealed, painless integration.

Similarly, at the higher institutional level, at least one basic course in natural resources conservation should be required of every student — not just those majoring in forestry or wildlife or fisheries.

Conservation is not the concern of just a few specialists. If it concerns everyone, then all persons must be reached in conservation education training: the lawyer, scientist, engineer, the banker, preacher, house worker, laborer.

The argument may be used that there is no room in the present curriculum for more course work. I say that for anything as vital as conservation, a place can

be and a place *must* be found. This idea that a place *can't* be found in our school system for additional courses vital to a well-rounded education is unfounded. We better take sterner educational measures or our future is lost.

At the adult level, two areas of concentration need strengthening: the in-service training of teachers and mass adult conservation education. More workshops for teachers are needed.

For coordination of the conservation education effort, one more course of action is suggested. That is that more use be made of qualified conservation coordinators or staff consultants. There is no reason why every state board of education should not have a supervisor of conservation education. Similarly, supervisors should be appointed to coordinate conservation education in all large natural resource agencies, state and federal, plus any large educational agencies and the military services. If such were the case, a more united conservation education front would soon be showing itself in America.

## ANSS Officers and Board Members

FOR THE YEAR 1959

### Officers

*President*, Stanley B. Mulaik, Salt Lake City, Utah; *President-elect*, Emery L. Will, Oneonta, New York; *1st Vice President*, (Membership Chairman) S. Glidden Baldwin, Catlin, Illinois; *2nd Vice President*, H. Raymond Gregg, (Chairman Committee on Affiliates), Omaha, Nebraska; *Secretary*, Miss Beth Schultz (2 year term, expires 1960), Kalamazoo, Michigan; *Treasurer*, Howard E. Weaver (2 year term, expires 1959), Urbana, Ill.

### Board members whose term expires, December, 1959

Mrs. Charlotte Hilton Green, Raleigh, North Carolina; Miss Mabel H. James, Holland, New York; Edwin A. Mason, Easthampton, Mass.; Mrs. Stanley B. Mulaik, Salt Lake City, Utah; Roland C. Ross, Pasadena, California.

### Board Members whose term expires December, 1960

Ted F. Andrews, Emporia, Kansas; Mrs. James B. Blair, Barrington, Illinois; John W. Brainerd, Springfield, Mass.; Verne N. Rockcastle, Ithaca, New York; Miss Helen B. Ross, Fitchburg, Mass.

Additional field trip time can be squeezed from a busy schedule by planning school yard trips for the last period. At dismissal time, the children will be in the yard with wraps on, ready to go home.

## Teaching Tips for Nature Study

*At the December, 1958, Meetings of the ANSS in Washington, D. C., the suggestion was made that since a large part of our membership was composed of teachers, a page or so of teaching helps in each issue of the NEWSLETTER might be welcomed. This means of course that your editor is in need of contributions of such items from all of you. During your years of teaching experience you have surely happened on some simple little ways of doing things to make teaching easier, more interesting and more fun. Just jot some of these down, please, and mail them to me today. Minimum length, a few sentences, maximum about 350 words or roughly one typewritten page double-space for each item. Since many of our members also teach in summer camps and workshops, suggestions useful in day camps, long term camps, and on playgrounds will be helpful too. For our June issue, we will need to receive your contributions by April 10. Send them in much sooner if you can. — Editor.*

*Since this is a new feature and contributions for this issue were lacking, the following is a digest of some ideas brought forth at the December meeting:*

Although good books and pictures make fine supplementary teaching material, we must not lose sight of the fact that in Nature Study, Conservation, or any kind of Science teaching, there is no substitute for the real thing. And, there is more good first hand teaching material on your doorstep than you might think. This is true even if you teach in the heart of a vast city.

Even that little plant on the window sill has a message for you. Growing there in the sun, it is doing something no animal can do and no animal can live without. It is making food. The pupils are helping it. They give it water and the carbon dioxide they exhale. The plant, in turn, as it makes its food, is releasing oxygen and water into the air, thus making the air better for the children to breathe.

In this space-minded age it is interesting to try to observe the motions of the earth. A sundial marked out with pebbles on your school yard and with a broomstick for gnomon will help you watch the earth's rotation. A pencil slanted in a pan of Plaster of Paris at an angle equal to your latitude and the pan oriented on your sunny window sill so that the upper end of the slanting pencil points north makes a good sundial. You can SEE the earth's rotation at sunrise or sunset. Remember that the Earth turns from the West towards the East. Think of this as you face the sunset and watch the western horizon move up over the sun as it rotates to the East. At sunrise, you and the horizon dip eastward as the Earth rotates, thus exposing the sun.

John Muir says, "The grand show is eternal. There is always a sunrise somewhere. The dew is never all dry at once, showers are always falling somewhere, vapor is ever rising. Eternal sunrise, eternal sunset, eternal dawn and gloaming on sea, on the continent, on the

islands, each in its turn as the round earth rolls."

To observe the Earth's revolution about the Sun, have each pupil sketch the western skyline as seen from his home and mark on it once each week the position, date and time of the sunset. The march of the sunset along the horizon as the weeks pass is an amazing thing. Try to synchronize these home-made charts with a diagram showing the twelve positions of the Earth in its orbit around the Sun. Watch at dusk for the constellation first appearing where the Sun set. It will be one of the twelve constellations of the Zodiac which lie in the same plane as the sun and all the planets. These twelve constellations are important signposts in any study of the sky.

Do you hear too much depressing talk about the terrible state the world is in? People need more good fresh air and to go out and walk in the fields and woods more often. A little of the naturalist John Muir's philosophy might help for he found this a glorious world — "The morning stars still sing together and the world not yet half done becomes more beautiful every day." For interesting, delightful and inspiring reading try *The Wilderness World of John Muir* with an introduction and interpretive comments by Edwin Way Teale, Houghton Mifflin Company, Boston.

Here is a little first aid for your weather study. Let the children cut cloud pictures out of Arizona Highways Magazines or old National Geographics. They can make these into a beautiful and colorful chart illustrating all the common forms of clouds. A tin can set up in a level spot at a distance from trees and buildings makes a fine rain gauge. A soda straw arrow with paper "feather" added by slitting one end of the straw and pasting it against the feather makes a good wind vane. Mount the vane with a common pin inserted in the eraser on the end of a pencil. Insert pin so that the tail or feather end is slightly heavier

and you will have a very sensitive and excellent wind vane. To use, hold it erect overhead and stand facing north at a distance from trees and buildings.

Make a chart showing birds seen or heard in your area and have a diagrammatic representation of permanent residents, winter visitors and migrants. Rule off a large sheet of tag board with space for bird names at left and opposite each name space rule small squares, one for each week in the year. Date the squares across the top. Write down the names of the birds as seen each week and shade in the square representing the week seen. If the chart is started January first, the permanent residents and winter visitors will be at the top. As the weeks pass, winter visitors disappear and the squares opposite will remain blank perhaps until next November. As the spring migrants arrive there will be a slanting line of shaded squares starting in March for the early migrants and continuing to June. As the nesting season ends and the birds leave for the south, the shaded squares will slant off again, usually in a rather irregular fashion until only the permanent residents and winter visitors remain.

Keep yourself posted on new natural history books. Consult Nature Magazine, Audubon Magazine, Natural History Magazine (published by the American Museum of Natural History in New York City), Cornell Science Leaflet for reviews of recent books.

Build up your own library of good reference material. Write your State Department of Conservation Education, at your state capitol, for lists of available material — booklets, charts, slides, films. Many are free, all inexpensive. Consult your County Soil Conservation Agent. Write the U. S. Forest Service in Washington, D. C. for free materials and the address of your district Forester who will have materials adapted to your area. Some district forest offices have "Kits" for teachers containing charts, pamphlets and other items, prepared for various age levels. Write to National Audubon Society, 1130 Fifth Avenue, New York City for lists of its inexpensive teaching materials and films and slides. Write also to the National Wildlife Federation, 232 Carroll Street N.W., Washington 12, D. C. for lists of their inexpensive teaching materials. Write also to Garden Clubs of America, 15 E. 58 St., New York City for their Conservation Kits for teachers. . . . And, when you get all this material, be sure to read it and *keep it handy* for easy reference. If you lack steel files, let your grocer help you find a strong clean carton of suitable size.

Widen your horizons. This usually continued on page 4



## TEACHING TIPS FOR NATURE STUDY

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takes long range planning with regard to necessary money and arrangements for the family, but if you start planning now you can:

1) Attend a summer nature and conservation camp or workshop in the outdoors. There are many places to go. Write National Audubon Society about its four camps for adults (Maine, Connecticut, Wisconsin and California). Each runs a series of two week sessions all summer. Write to Mr. Adrian Fox, P. O. Box 521, Benjamin Franklin Station, Washington 4, D. C. for a printed list of conservation workshops and schools for the summer of 1959. Watch your own teacher's journal for ads about summer workshops, watch American Forests Magazine for News of the American Forestry Association's 1959 Wilderness Pack Trips.

2) Attend the December, 1959, meetings of your own American Nature Study Society. This year they will be in Chicago. Circle December 26 now, the day you will arrive in Chicago. The meetings last only about four days between Christmas and New Year's. Why attend? — To make new friends, get acquainted with others who share your interests and profession; to collect ideas from those you meet and visit with, from the many good papers — ideas you can put to good use back home; to have fun, too, and to come home inspired and ready to do a better job than ever with your teaching program. The meetings are most informal, interesting and fun. You will find an ANSS table in the lobby of your hotel, and seated there will be some officers of ANSS to welcome you and make you feel at home. Start planning now and COME. You will get a lot and you will give a lot as you chat with those you meet. You are needed and wanted in Chicago next December 26.

Almost any existing junior or senior high school with any grounds, even though almost completely paved, can profit from a constructively critical review of its grounds. A biological approach can be particularly rewarding. A land-use survey can increase the student's understanding of the importance of natural resources to the human animal and at the same time help insure samples of such resources for future study at the school. Herein lies a great challenge for biology teachers.

## State Membership Chairmen Congratulated

The Council of the ANSS at their annual meeting, congratulated all State Chairmen for the fine job they had performed in 1958. The following are hereby congratulated:

**Alabama**, Mrs. Blanche E. Dean, 1228 S. 29 St., Birmingham 5; **Arkansas**, Miss Ruth Armstrong, 1106 N. 14th St., Fort Smith; **California**, Miss Edith Curry, 4656 Palm, La Mesa; **Connecticut**, Miss Mildred E. Abbott, 717 Montauk Ave., New London; **Florida**, Mrs. Clyde T. Reed, 3202 N. Rome Ave., Tampa 7; **Georgia**, Mr. W. H. Cleveland, 1419 West View Dr. SW, Atlanta;

**Illinois**, Mrs. Robert E. Rulison, 754 Greenview Place, Lake Forest; **Indiana**, Miss Norma Koch, 27 W. Hanna, Indianapolis 27; **Iowa**, Miss Pauline L. Sauer, Science Department, Iowa State Teachers College, Cedar Falls; **Maine**, Mrs. Paul Hannemann, 21 School St., Brewer; **Massachusetts**, Dr. Frank J. Hilferty, State Teachers College, Bridgewater; **Michigan**, Miss Verne A. Fuller, Western Michigan College, Kalamazoo;

**Missouri**, Mr. Oscar Hawksley, Rt. 5, Warrensburg; **Kansas**, Mr. Ted F. Andrews, Biology Dept., KSTC, Emporia; **Nebraska**, Mr. Raymond H. Gregg, 1004 Sunset Trail, Omaha 3; **Maryland**, Mr. Charles M. Mattison, 10014 Greenock Rd., Silver Springs; **New Jersey**, Mr. W. F. Alston, High School Building, Princeton; **New York**, Mrs. Alice E. Ulrich, 193 LaSalle Ave., Buffalo 14; **New Mexico**, Miss Mary Orr, Box 183, Reserve; **Nevada**, Dr. Richard G. Miller, R.R. 1, Carson City;

**North Carolina**, Mrs. Charlotte Hilton Green, 3320 White Oak Rd., Raleigh; **Ohio**, Mrs. Neil M. Waterbury, Ginger Hill Lane, Toledo 13; **Oregon**, Miss Ruth E. Hopson, 4138 S.W. 4th Ave., Portland 1; **Pennsylvania**, Mr. Dwight E. Sollberger, State

Teachers College, Indiana; **Rhode Island**, Mr. Bernard L. Gordon, 9 Washington St., Westerly; **Tennessee**, Mr. Arthur H. Cook, Peabody College, Nashville;

**Texas**, Mr. Joseph M. Heiser, Jr., 1724 Kipling St., Houston 6; **Utah**, Mrs. Stanley B. Mulaik, 1144 East 3rd South St., Salt Lake City, 21; **Vermont**, Mr. Elighton B. Gough, Upper Vine St., Northfield; **Virginia**, Mrs. Gunnar Grotos, 3215 M. First St., Arlington 1; **Wisconsin**, Miss Helen Porter, 1440 S. 80, West Allis 14; **District of Columbia**, Mr. Adrian Fox, P. O. Box 521, Benjamin Franklin Station, Washington 4.

Everyone is requested to help his own State Chairman by getting new members. You may send the new applications to your chairman if you wish. Let's keep the membership drive rolling!

Sign your name on the front of the membership brochure and also somewhere on the application blank before you give them out. Send for more blanks any time.

### Mrs. Mildred Rulison Wins

The Illinois State Chairman was winner of the free hotel bill in Washington. She was unable to attend as she and her husband are planning a trip to Europe. Mrs. Rulison will be sent a suitable gift.

Glidden Baldwin, First Vice President and National Membership Chairman makes the same offer for 1959. He will pay the hotel bill of the State Chairman whose State has the largest increase in members during 1959. Deadline is Christmas. Glidden also requests that all present chairmen serve for 1959. He says "I couldn't have a finer crew, thank them all for me."

## Application for Annual Membership

Membership in the American Nature Study Society includes a membership card, a quarterly NEWSLETTER and the magazines you select. Please note you can get your membership for less than \$2.00, even free, by selecting the proper group.

GROUP COST		MEMBERSHIP COST
1	\$2.00 Membership only (NEWSLETTER)	\$2.00
2	3.00 Membership with Cornell Rural Leaflet (4 issues)	2.00
3	4.50 Membership with Canadian Audubon Magazine (5 issues)	1.00
4	5.50 Membership with Canadian Audubon & Cornell Leaflet	1.50
5	5.50 Membership with Nature Magazine (10 issues)	.50
6	6.50 Membership with Nature Magazine & Cornell Leaflet	1.00
7	8.00 Membership with Nature Magazine & Canadian Audubon	free
8	8.50 Membership with Nature Magazine & Canadian Audubon & Cornell Leaflet	free

F For Family Membership, add \$1.00 to cost of group selected.

Circle group desired, send application with name and address and check to

Dr. Howard E. Weaver,

202 Men's Old Gym, University of Illinois, Urbana, Illinois

AMERICAN NATURE STUDY SOCIETY  
State Teachers College, Fitchburg, Mass.

Sec. 34.65 (e) P. L. & R.

